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EXAMINER

BETT, JACOB F

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 March 2010 has been entered.

Remarks

2. In response to communications filed on 26 March 2010, claims 1, 12, 19, and 26 have been amended and claim 20 has been cancelled per the applicant's request. Claims 1-19 and 21-26 are presently pending in the application.
3. It is noted that in the remarks section, Applicant has indicated that claim 12 has been both cancelled and amended. Since claim 12 is listed as currently amended in the listing of claims, Examiner will disregard remarks directed to claim 12 being cancelled.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3, 7, 9-14, 18-21, 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieson, "Implementing Oracle Workflow", (2000) in view of Lee et al. (2004/0186860 A1).

As to claim 1, Mathieson teaches a computer-implemented method of committing a transaction to a database, the method comprising:

receiving, at one or more computer systems, information defining an occurrence in one or more database applications [of] a business event that, upon occurrence, causes a database management system to intercept database transactions before the database transactions are committed to databases provided by the database management system, the database transactions representative of the business event and instantiated between the one or more database applications and the database management system (see Figure 1, "Creating a Purchase Order", and see Figure 3 "Start);

receiving, at the one or more computer systems, an electronic record definition defining one or more fields to include in electronic records automatically generated from data in the database transactions representative of the business event, the electronic record definition requiring the electronic records to have at least one electronic signature (see figure 1, various fields are displayed that are stored in the database as part of the workflow);

detecting, at the one or more computer systems, a database transaction between a database application and the database management system (see Figure 1);

determining, at the one or more computer systems, that the database transaction satisfies an occurrence condition of the business event and intercepting transaction data from the database transaction with the one or more computer systems prior to the database management system

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committing the database transaction to a database of the database management system (see pages 9-10);

creating an electronic record at the one or more computer systems from the intercepted transaction data prior to the database management system committing the database transaction to the database (see figure 11 and figure 12);

storing, in a storage device associated with the one or more computer systems, the electronic record separately from the transaction data from the database transaction (see page 9 and 10, the status is maintained separately from the document);

executing a rule associated with the business event at the one or more computer systems to determine whether an electronic signature is required to connote review of the electronic record created from the intercepted transaction data in order for the database management system to commit the database transaction to the database (see pages 2-3);

requesting the electronic signature using the one or more computer systems prior to the database management system committing the database transaction to the database based on a determination that an electronic signature is required (see pages 2-3); and

committing the database transaction to the database using the one or more computer systems in response to receiving the electronic signature (see figure 3).

Mathieson does not distinctly disclose receiving, at the one or more computer systems, information that maps data from underlying database tables associated with the database transaction to at least some of the one or more fields defined in the electronic record definition; storing, in a storage device associated with the one or more computer systems, the electronic record definition in association with the business event based on the information that maps data

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from the underlying database tables associated with the database transactions to at least some of the one or more fields defined in the electronic record definition; and creating a record according to the electronic record definition associated with the business event in the information that maps data from underlying database tables associated with the database transactions to the at least some of the one or more fields defined in the electronic record definition.

However, Lee et al. teaches this, see paragraphs 0042-44. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Mathieson to include the teachings of Lee et al. because these teachings would allow for the data from the record to be stored into database tables making it so that data stored is easier accessed and stored in a smaller space than if each form was stored as its own document.

As to claim 2, Mathieson teaches wherein the electronic record comprises data generated from multiple tables of the database (see Figure 1, information of pull down menus from different tables and see pages 6-7, "Interface to CERN Databases").

As to claim 3, Mathieson teaches wherein the electronic record is stored in a common repository of electronic records that provides an audit trail that cannot be altered or disabled by users of the database (see Figures 11 and 12).

As to claim 7, Mathieson teaches further displaying at least some of the transaction data in the electronic record on a computer display based on the determination that an electronic

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signature is required (see page 1, "web-based interface").

As to claim 9, Mathieson teaches further comprising obtaining and verifying the electronic signature (see page 2, "authorization password").

As to claim 10, Mathieson teaches wherein the rule requires a plurality of different electronic signatures and wherein, if execution of the rule results in a determination that a plurality of electronic signatures are required, requesting the plurality of electronic signatures prior to committing the data to the database (see page 3, "at least one signature to authorize payment").

As to claim 11, Mathieson teaches wherein, if the electronic signature is rejected or otherwise cannot be obtained, the database transaction is rolled-back and not committed to the database (see Figure 3, "End (Rejected)").

As to claim 12, Mathieson teaches a computer system that manages electronic records stored in a database, the computer system comprising: a processor (see page 1); and a computer-readable memory coupled to the processor, the computer-readable memory storing a set of instructions (see page 1) executable by the processor to:

receive information defining an occurrence in one or more database applications as a business event that, upon occurrence, causes a database management system to

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intercept database transactions before the database transactions are committed to databases provided by the database management system, the database transactions representative of the business event and instantiated between the one or more database applications and the database management system (see pages 9-10);

receive an electronic record definition defining one or more fields to include in electronic records automatically generated from the data in the database transactions representative of the business event, the electronic record definition requiring the electronic records to have at least one electronic signature (see figure 1, various fields are displayed that are stored in the database as part of the workflow);

detect a database transaction between a database application and the database management system (see figure 1);

determine that the database transaction satisfies an occurrence condition of the business event and intercept transaction data from the database transaction initiated between the one or more database applications and the database management system prior to the database management system committing the database transaction to a database of the database management system (see pages 9-10);

create an electronic record from the intercepted transaction data prior to the database management system committing the database transaction to the database (see figures 11 and 12);

store the electronic record separately from the transaction data from the database transaction (see page 9 and 10, the status is maintained separately from the document);

execute a rule associated with the business event to determine whether an electronic signature is required to connote review of the electronic record created from the intercepted transaction data in order for the database management system to commit the database transaction to the database (see pages 2-3); and

request the electronic signature prior to the database management system committing the database transaction to the database based on a determination that an electronic signature is required (see pages 2-3); and

commit the database transaction to the database in response to receiving the electronic signature (see figure 3).

Mathieson does not distinctly disclose receiving information that maps data from underlying database tables associated with the database transaction to at least some of the one or more fields defined in the electronic record definition; store the electronic record definition in association with the business event based on the information that maps data from the underlying database tables associated with the database transactions to at least some of the one or more fields defined in the electronic record definition; and create a record according to the electronic record definition associated with the business event in the information that maps data from underlying database tables associated with the database transactions to the at least some of the one or more fields defined in the electronic record definition.

However, Lee et al. teaches this, see paragraphs 0042-44. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Mathieson to include the teachings of Lee et al. because these teachings would allow

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for the data from the record to be stored into database tables making it so that data stored is easier accessed and stored in a smaller space than if each form was stored as its own document.

As to claim 13, the applicant is directed to the citations for claim 2 above.

As to claim 14, the applicant is directed to the citations for claim 3 above.

As to claim 18, the applicant is directed to the citations for claim 9 above.

As to claim 19, Mathieson teaches a computer-readable storage medium configured to store computer-executable code for managing electronic records stored in a database, the computer-readable storage medium comprising:

code [that receives] information defining an occurrence in one or more database applications as a business event that, upon occurrence, causes a database management system to intercept database transactions before the database transactions are committed to databases provided by the database management system, the database transactions representative of the business event and instantiated between the one or more database applications and the database management system (see figure 1, “creating a Purchase Order”, and see figure 3 “Start”);

code [that receives] an electronic record definition defining one or more fields to include in electronic records automatically generated from data in the database transactions representative of the business event, the electronic record definition requiring the electronic records to have at least one electronic signature (see figure 1);

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code [that detects] a database transaction between database application and the database management system (see figure 1);

code [that determines] that the database transaction satisfies an occurrence condition of the business event in response to monitoring for the business event (see figure 12);

code [that intercepts] transaction data from the database transaction initiated between the one or more database applications and the database management system prior to the database management system committing the transaction to a database of the database management system (see pages 9-10);

code [that creates] an electronic record from the intercepted transaction data prior to the database management system committing the database transaction to the database (see figures 11 and 12);

code [that stores] the electronic records separately from the transaction data from the database transaction (see page 9 and 10, the status is maintained separately from the document);

code [that executes] a rule associated with the event to determine whether an electronic signature is required to connote review of the electronic record created from the intercepted database transaction in order for the database management system to commit the database transaction to the database (see pages 2-3); and

code [that requests] the electronic signature prior to the database management system committing the database transaction to the database based on a determination that that an electronic signature is required (see pages 2-3); and

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code [that commits] the database transaction to the database in response to receiving the electronic signature. (see figure 3).

Mathieson does not distinctly disclose code [that receives] information that maps data from underlying database tables associated with the database transactions to at least some of the one or more fields defined in the electronic record definition; code for storing the electronic record definition in association with the business event based on the information that maps data from the underlying database tables associated with the database transactions to at least some of the one or more fields defined in the electronic record definition; and code for creating a record according to the electronic record definition associated with the business event and the information that maps data from underlying database tables associated with the database transactions to the at least some of the one or more fields defined in the electronic record definition.

However, Lee et al. teaches this, see paragraphs 0042-44. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Mathieson to include the teachings of Lee et al. because these teachings would allow for the data from the record to be stored into database tables making it so that data stored is easier accessed and stored in a smaller space than if each form was stored as its own document.

As to claim 20, Mathieson teaches wherein the code for creating an electronic record further comprises code for creating electronic records in response to the occurrence of a predefined event (see Figure 11 and Figure 12, which display records of status information of

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documents).

As to claim 21, the applicant is directed to the citations for claim 3 above.

As to claim 25, the applicant is directed to the citations for claim 9 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6, 15-17, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieson in view of Lee et al. as applied to claims 1-3, 7, 9-14, 18-21, 25 above, and in further view of Bisbee et al. (U.S. patent application publication No. 2001/0002485 A1) and Bertino et al., "Integrating XML and Databases".

Claims 4 and 5 are rejected for the following reasons:

Mathieson fails to expressly disclose the use of XML Documents.

Bisbee et al. teaches the objects being stored as XML documents, see paragraph 0071.

Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use XML as a well-known standard which provides the advantage of being easily supported.

However, it is not expressly stated in the above mentioned references how the data is stored within the database. Bertino et al. teaches the storage of an unstructured XML document as a column of a table as a CLOB data type, see page 86 column 1. Thus, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to include these features as it provides an organized method for storing the xml documents.

Also note, Mathieson teaches using “Oracle Workflow”, and the document “Oracle Workflow Release 2.6.2 Business Event System and PL/SQL Development Guidelines” teaches that Oracle Workflow typically uses XML documents as see on page 15.

As to claim 6, Mathieson as modified, teaches wherein XML fields of the data are filled with the transaction data based on a predefined mapping of a data type definition to multiple data sources (see Bisbee et al. and Bertino et al. as cited above, where data in XML files is implicitly formatted using the mapping of a DTD, as the DTD defines how data is mapped and related in an XML file).

As to claim 15, the applicant is directed to the citations for claim 4 above.

As to claim 16, the applicant is directed to the citations for claim 5 above.

As to claim 17, the applicant is directed to the citations for claim 6 above.

As to claim 22, the applicant is directed to the citations for claim 4 above.

As to claim 23, the applicant is directed to the citations for claim 5 above.

As to claim 24, the applicant is directed to the citations for claim 6 above.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieson in view of Lee et al. as applied to claims 1-3, 7, 9-14, 18-21, 25 above, and in further view of Bisbee et al. and the applicant’s admitted prior art (see MPEP §2144.03 C., the applicant’s failure to

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traverse the examiner's assertions in the previous office action are taken to be an admittance of prior art).

As to claim 8, Mathieson does not distinctly disclose wherein the transaction data in the electronic record is displayed according to a predefined layout set forth in an XSL style sheet associated with data comprising a copy of the electronic record as displayed, wherein the data is stored within a column of a database table.

Bisbee et al. teaches XML for formatting the data and having data that contains copies (see paragraph 0100). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use XML as a well-known standard which provides the advantage of being easily supported.

However, Mathieson as modified by Bisbee et al. still fails to expressly disclose how the data is presented to the user, and the data being stored in tables.

The applicant has admitted that use of XSL to provide a layout for displaying XML documents and the ability to store data in tables was well known in the art at the time of the invention. Thus it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Mathieson to include these things because XSL is the standard language for determining XML document presentation and storing data in tables is makes retrieval efficient.

Allowable Subject Matter

8. Claim 26 is allowed.

Response to Arguments

9. Applicant's arguments filed 26 March 2010 have been fully considered but they are not persuasive.

In response to Applicant's arguments that the combination of references does not disclose "receiving, at one or more computer systems, information defining an occurrence in one or more database applications as a business event that, upon occurrence, causes a database management system to intercept database transactions before the database transactions are committed to databases provided by the database management system," the arguments have been fully considered, but are not deemed persuasive. Applicant feels that there is a difference between defining how a document should flow through a workflow before it is committed and defining an occurrence of a business event in a database application that causes a system to intercept the transaction before it is committed to databases provided by a database management system. The event that is defined is the start of the workflow with the creation of a document. Different documents are defined that result in different workflows. Mathieson indicates that different paths are chosen depending on the type of document, who created, and whose money is being spent. Indicating this information would be a defined business event that occurs in a database application (Oracle Workflow). The application prevents the event from being committed to the database (approved) until authorized individuals approve the document. Therefore, this limitation is taught by Matheson.

In response to Applicant's arguments that Mathieson does not disclose "receiving, at one or more computer systems, an electronic record definition defining one or more fields to include

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in electronic records automatically generated from data in the database transactions representative of the business event," the arguments have been fully considered, but are not deemed persuasive. The document that is being approved is representative of the business event. This document includes fields that are defined as part of the document and must be filled out by the user. The claim requires that one or more fields are defined to include in the electronic records. These fields are automatically created every time a new instance of a document is created to represent a new business event. The claim does not require auto population of the fields that are representative of the business event. Therefore Mathieson does teach this limitation.

In response to Applicant's arguments that Mathieson does not teach "creating an electronic record at the one or more computer systems from the intercepted transaction data prior to the database management system committing the database transaction to the database according to the electronic record definition associated with the business event and the information that maps data from underlying database tables associated with the database transaction to the at least some of the one or more fields defined in the electronic record definition," the arguments have been fully considered, but are not deemed persuasive.

It is first noted that the applicant has indicated that Mathieson does not disclose all of these features. This appears to be an attack on the individual reference when Lee is also used to teach mapping data from an underlying table to a record in a database. One cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Mathieson teaches creating a record of the document status (electronic record) including information from the document fields (person approving the document). This information is recorded before the final approval is committed and the workflow is completed. As indicated in the rejection, Mathieson is silent as to how this information is stored (if it is stored in an underlying table). However, Lee teaches storing the information in a table and mapping the information from the form to the table. Therefore, the combination of reference teaches this limitation.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Bétit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 9:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Jacob F Bétit/
Primary Examiner, Art Unit 2169

jfb
13 March 2011